



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,736	11/20/2003	Scott E. Black	BO1 - 0019US	8708

60483 7590 07/09/2007
LEE & HAYES, PLLC
421 W. RIVERSIDE AVE.
SUITE 500
SPOKANE, WA 99201

EXAMINER

LAU, TUNG S

ART UNIT	PAPER NUMBER
----------	--------------

2863

MAIL DATE	DELIVERY MODE
-----------	---------------

07/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/717,736	BLACK ET AL.	
	Examiner	Art Unit	
	Tung S. Lau	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/15/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 18-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 18-23 stand withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention as noted on 05/18/2006.

Specification amendment

2. The Specification amendment filed on 06/15/2007 has been accepted by the examiner.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The newly added "automatically reconfiguring" is not present and enable in the specification.

The only "automatic function" the examiner found was on page 4-5, lines 25-7 where it talks about a BIT and it seems has the automatic function (algorithm) to detect system health shown in fig. 2-5, but the actual reconfiguration process in

fig. 2, unit 204, "actuator command" (configuration/reconfiguration, page 5, lines 8-18, page 4, lines 16-24) does not appears to be 'automatic'.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-13 and 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Germanetti (U.S. Patent 6,400,282, Date of Patent Jun. 4, 2002).

Regarding claim 1:

Germanetti describes a method of operating a product, comprising: monitoring a first diagnostic information of a component of the product (abstract); monitoring a second diagnostic information of a system of the product (Col. 2, Lines 53-62), the system including the component (Col. 2, Lines 57) wherein the second diagnostic information (col. 4, lines 36-38, a speed detection, Col. 2, Lines 55, this case is a battery temperature probe, do not include the first diagnostic information (Col. 2, Lines 56, this case is an additional fuel tank info, independent of the first information fed to the system); combining the first diagnostic information of the component and the second diagnostic information of the system (Col. 2-3, Lines 64-12); automatically reconfiguring at least one of the component (col. 2, lines 15-23) and the system to compensate if the combined

first and second diagnostic information indicates a degradation of the component (Col. 3, Lines 55-59).

Regarding claim 2, Germanetti further describes monitoring a first diagnostic information of a component includes monitoring a health indication of the component (Col. 3, Lines 55-59).

Regarding claim 3, Germanetti further describes monitoring a first diagnostic information of a component includes monitoring a capability indication of the component (Col. 3, Lines 55-59).

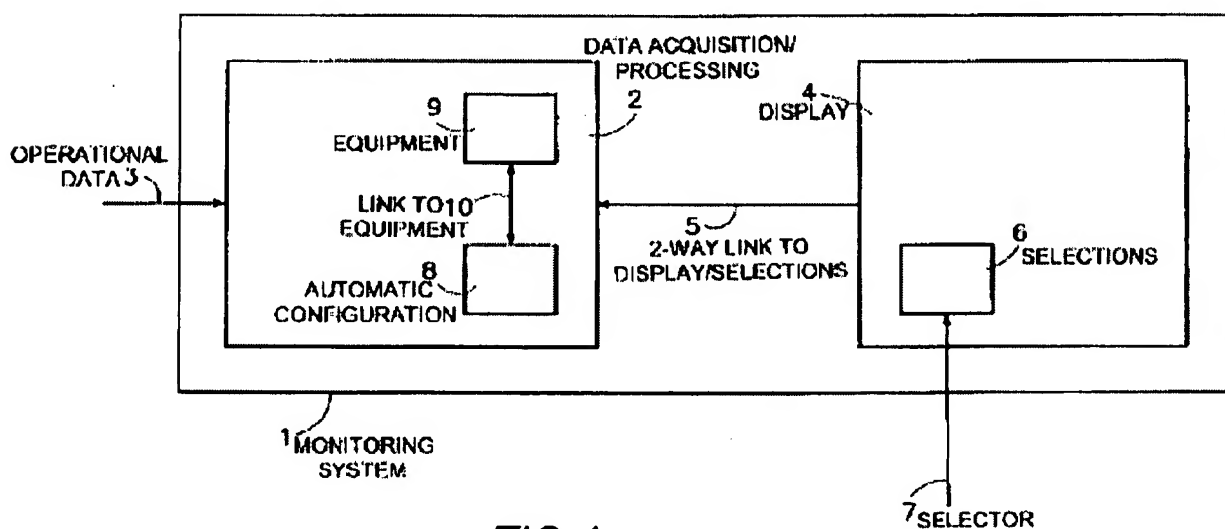


FIG. 1

Regarding claim 4, Germanetti further describes monitoring a first diagnostic information of a component includes monitoring a reliability indication of the component (Col. 3-4, Lines 66-5).

Regarding claim 5; Germanetti further describes monitoring a information of a component includes monitoring a first diagnostic information of an actuator (Col. 4, Lines 18-31).

Regarding claim 6, Germanetti further describes monitoring a second diagnostic information of a system includes monitoring a health indication of the system (Col. 3, Lines 55-59).

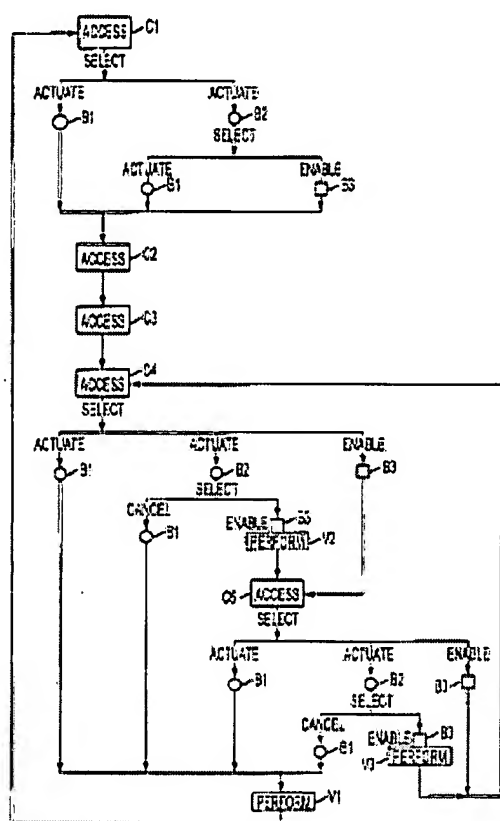


FIG. 2

Regarding claim 7, Germanetti further describes monitoring a second diagnostic information of a component includes monitoring a capability indication of the component (Col. 3, Lines 55-59).

Regarding claim 8, Germanetti further describes monitoring a second diagnostic information of a component includes monitoring a reliability indication of the component (Col. 3-4, Lines 66-5).

Regarding claim 9, Germanetti further describes monitoring a second diagnostic information of a system includes monitoring a second diagnostic information of a flight control system (Col. 4, Lines 36-8).

Regarding claim 10, Germanetti further describes reconfiguring at least one of the component and the system includes reconfiguring a flight control system to take into account a degradation of an actuator (Col. 3, Lines 55-59, realtime info. Including current status and degradation info).

Regarding claim 11, Germanetti further describes feeding back the reconfiguring of the at least one of the component and the system into the fusion of the first and second diagnostic information (fig. 1, unit 8).

Regarding claim 12, Germanetti further describes inputting the combined first and second diagnostic information into a maintenance support block (Col. 2, Lines 56-64, fig. 1, unit 2).

Regarding claim 13, Germanetti further describes inputting the combined first and second diagnostic information into a maintenance support block includes inputting the combined first and second diagnostic information into the maintenance support block to at least one of enable post-flight analysis and interpretation, and assist in assessing the prognosis of the component and system (Col. 3, Lines 13-39).

Regarding claim 16, Germanetti further describes reconfiguring at least one of the component and the system includes reconfiguring at least one of the component and the system using an integrated vehicle health management system (fig. 1, unit 2, Col. 3, Lines 55-59).

Regarding claim 17, Germanetti further describes integrating an integrated vehicle health management system will reconfigurable control, and performing tests of at least one of the component and the system during actual operation of the product (Col. 3, Lines 13-39).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

a. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Germanetti (U.S. Patent 6,400,282) in view of Board et al. (U.S. Patent 6,351,713).

Regarding claim 14, Germanetti describes a method including the subject matter discussed above except to reduce false alarm in a build in test system, Board describes to reduce false alarm in a build in test system (Col. 3, Lines 1-11), in order to maximize fault detection probability (Col. 3, Lines 1-4), and increase reliability of the helicopter (Col. 2, Lines 47-53, Col. 3, Lines 1-11).

Regarding claim 15, Germanetti describes a trending one or more degradation to provide a prognostic capability (Col. 3, Lines 55-59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Germanetti to reduce false alarm in a build in test system taught by Board in order to maximize fault detection probability and increase reliability of the helicopter.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Germanetti and Board are analogous art because they are from the same field of endeavor, detecting faulty system in a helicopter.

Response to Arguments

6. Applicant's arguments with respect to the amended claims filed on 06/15/2007 have been considered but are not persuasive.

A. Applicants argue in the arguments that the prior art does not show the "monitoring a second diagnostic information of a system of the product, the system including the component, wherein the second diagnostic information does not include the first diagnostic information." (remarks page 8, lines 8-20).

Germanetti describes "monitoring a second diagnostic information of a system of the product (Col. 2, Lines 53-62), the system including the component (Col. 2, Lines 57) wherein the second diagnostic information (Col. 2, Lines 55, this case is a battery temperature probe) does not include the first diagnostic information

(Col. 2, Lines 56, this case is an additional fuel tank info, col. 4, lines 37, a speed detection module, are independent of the first information fed to the system)"

Germanetti describes a configuration of a subsystem (col. 2, lines 14-17) including a speed detection module (col. 4, lines 37) and this detection does not include the detection of other components for example a battery temperature probe (col.2, lines 56); That read on to the above claim limitation.

Applicants also argue that no suggestion monitoring those optional item in col. 2, lines 55-67. (remarks page 8, lines 25-26)

In col. 2, lines 4-10, Germanetti describes the system can configure any part of the operation of the aircraft, including at least one item in col. 2, lines 55-67, and any of the fault in the system can be replace in col. 3, lines 55-59, including optional item (at least one of them), that read on to have suggestion to monitor those optional items.

B. Applicants argue in the arguments that the prior art does not show the "automatically reconfiguring at least one of the component mad the system to compensate if the combined first and second diagnostic information indicates a degradation of the component." (remarks page 9, lines 3-5).

Germanetti describes in col. 2, lines 15-24:

Art Unit: 2863

15 ~~means able automatically and completely to configure,~~
~~during the selection of at least one option, at least said~~
~~data acquisition and processing means and said display~~
~~means so as to adapt them to said option.~~

20 Thus, by virtue of the invention, by simply selecting an
option, said monitoring system ~~is automatically configured~~
~~in such a way as to be adapted to said option, thus making~~
~~it possible to remedy the aforesaid drawbacks and in par-~~
~~ticular the lengthy and irksome work required with regard to~~
~~the known and aforesaid indicators.~~

Germanetti describes here a monitoring system that automatically and completely configure the system during the selection,

Germanetti describes "automatically reconfiguring at least one of the component (col. 2, lines 15-24) and the system to compensate if the combined first and second diagnostic information indicates a degradation of the component (Col. 3, Lines 55-59)".

C. Applicants argue in the arguments that the prior art does not show the claim limitation in claims 2-3 (remarks page 17-23).

Regarding claim 2, Germanetti further describes monitoring a first diagnostic information of a component includes monitoring a health indication of the component (Col. 3, Lines 55-59).

Regarding claim 3, Germanetti further describes monitoring a first diagnostic information of a component includes monitoring a capability indication of the component (Col. 3, Lines 55-59).

D. Applicants argue in the arguments that the prior art does not show the claim limitation in claims 6-7 (remarks page 9-10, lines 24-5).

Regarding claim 6, Germanetti further describes monitoring a second diagnostic information of a system includes monitoring a health indication of the system (Col. 3, Lines 55-59).

Regarding claim 7, Germanetti further describes monitoring a second diagnostic information of a component includes monitoring a capability indication of the component (Col. 3, Lines 55-59).

E. Applicants argue in the arguments that the prior art does not show the claim limitation in claim 9 (remarks page 10, lines 6-13).

Regarding claim 9, Germanetti further describes monitoring a second diagnostic information of a system includes monitoring a second diagnostic information of a flight control system (Col. 4, Lines 36-8).

F. Applicants argue in the arguments that the prior art does not show the claim limitation in claim 10 (remarks page 10, lines 14-23).

Regarding claim 10, Germanetti further describes reconfiguring at least one of the component and the system includes reconfiguring a flight control system to take into account a degradation of an actuator (Col. 3, Lines 55-59, realtime info. Including current status and degradation info).

G. Applicants argue in the arguments that the prior art does not show the claim limitation in claim 12 (remarks page 10-11, lines 24-5).

Regarding claim 12, Germanetti further describes inputting the combined first and second diagnostic information into a maintenance support block (Col. 2, Lines 56-64, fig. 1, unit 2).

Art Unit: 2863

H. Applicants argue in the arguments that the prior art does not show the claim limitation in claim 1 (remarks page 12, lines 8-12).

Regarding claim 1:

Germanetti describes a method of operating a product, comprising: monitoring a first diagnostic information of a component of the product (abstract); monitoring a second diagnostic information of a system of the product (Col. 2, Lines 53-62), the system including the component (Col. 2, Lines 57) wherein the second diagnostic information (col. 4, lines 36-38, a speed detection, Col. 2, Lines 55, this case is a battery temperature probe, do not include the first diagnostic information (Col. 2, Lines 56, this case is an additional fuel tank info, independent of the first information fed to the system); combining the first diagnostic information of the component and the second diagnostic information of the system (Col. 2-3, Lines 64-12); automatically reconfiguring at least one of the component (col. 2, lines 15-23) and the system to compensate if the combined first and second diagnostic information indicates a degradation of the component (Col. 3, Lines 55-59).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

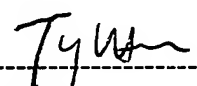
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory

Art Unit: 2863

action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tung S. Lau
AU 2863, Patent examiner
June 27, 2007